



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/636,145	08/10/2000	Etsuro Abe	428291/014	6579
7590	10/06/2003		EXAMINER TAWFIK, SAMEH	
Stroock & Stroock & Lavan LLP 180 Maiden Lane New York, NY 10038			ART UNIT 3721	PAPER NUMBER

DATE MAILED: 10/06/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/636,145

Applicant(s)

ABE, ETSURO

Examiner

Sameh H. Tawfik

Art Unit

3721

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 and 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I (claims 1-8) in Paper No. 8 is acknowledged. The traversal is on the ground(s) that a single search can be performed to evaluate the patentability of all claims. This is not found persuasive because the examiner believes that the search required for group I is different than the search required on group II, as set clearly on paper Num. 5.

The requirement is still deemed proper and is therefore made FINAL.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "gluing means" as disclosed in claim Num. 8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Art Unit: 3721

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Bally (3,419,937).

Bally discloses a corrugating roll (40) design for a corrugating machine comprising a pair of parallel, spaced apart corrugating rolls (40 and 42) which rotate in opposite direction on their respective rotational axes, the rotational axes of the corrugating rolls being spaced apart a predetermined distance (Fig. 1) and each of the corrugating rolls being formed along its outer peripheral surface with longitudinally extending teeth with tooth tips and tooth roots; a paper medium (14) to be corrugated adapted to be fed into a nip formed by the teeth of the corrugating rolls inter engaging (Fig. 1), and begin to be deformed as it moves into an actual corrugating impression zone in the nip where full engagement of the teeth takes place (Figs. 1 and 6-8), thereby providing a corrugations in the paper medium, characterized by depressions provided (via 60) in the tops of the tooth tips of at least one of the corrugating rolls (40) and spaced apart a predetermined distance along the length of the roll (Fig. 2), each of the depressions (Figs. 2, 4, and 5; via 60) having a bottom surface which is located to establish a spacing between the

Art Unit: 3721

bottom surface of the depression and the tooth root of the other corrugating roll at the actual corrugation impression zone in the nip (Fig. 2), the spacing being greater than the thickness of the medium, see for example (Figs. 2, 4, and 5).

Regarding claim 2: the ratio of the sum total of the axial lengths of the depressions to the transverse dimension of the paper medium measured longitudinally of the at least one of the corrugating roll is greater than a predetermined value (Figs. 2 and 3).

Regarding claim 4: each of the depressions (60) is provided at its opposite sides with ramps extending in a divergent fashion from the bottom surface thereof to the top of the tooth tip of the at least one of the corrugating rolls (Figs. 1 and 7).

Regarding claim 5: each of the tooth profiles of the corrugating rolls (40 and 42) comprising a combination of a plurality of arcs that are symmetrical with respect to a line connecting the apex of the tooth tip and the rotational axis of the corrugating roll (Fig. 1).

Regarding claim 6: the depressions of adjacent tooth tips of the at least one of the corrugating rolls are offset from one another along the length of the corrugating roll (Figs. 2, 4, and 5).

Regarding claim 7: the depressions (60) are disposed in helical pattern along the peripheral surface of the corrugating roll (Figs. 2, 4, and 5).

Regarding claim 8: the corrugating rolls cooperating to provided a corrugated paper medium, gluing means (Fig. 1, via 22 and 24) for applying glue to the corrugated medium.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3721

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bally (3,419,937).

Bally does not disclose that the bottom surface of each of the depressions is of a generally convex arc configuration in a direction toward the other corrugating roll with a radius of curvature greater than that of the tooth tips of the at least one of the corrugating rolls. However, it would have been an obvious matter of design choice to have modified Bally's corrugating roll by having the bottom surface of each of the depressions is of a generally convex arc configuration in a direction toward the other corrugating roll with a radius of curvature greater than that of the tooth tips of the at least one of the corrugating rolls, since applicant has not disclosed that the bottom surface of each of the depressions is of a generally convex arc configuration solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with having the depressions on a straight configuration, as suggested by Bally.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hsu 5443379, Miller 5419796, and Angelo 4699031 disclose different type of rollers.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sameh H. Tawfik whose telephone number is (703) 308-2809. The examiner can normally be reached on Tuesday - Friday from 8:00 AM to 6:00 PM.

Art Unit: 3721

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi Rada can be reached on (703) 308-2187. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3579 for regular communications and (703) 308-7769 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

ST.
September 30, 2003


EUGENE KIM
PRIMARY EXAMINER